Intervention Outcomes

State Fiscal Year 2010

Presented January 2011

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November 2009 Intervention
Sedative Hypnotics

Criteria Summary Case Outcomes

Criteria Number	Therapeutic Criteria Exceptions Reviewed	Cases Generated	Letters Generated	Letters Mailed
88	25	5	6	6
165	182	144	144	131
167	793	410	626	551
172	3	1	1	0
280	35	7	7	6
310	181	47	47	46
312	70	2	2	1
520	10	3	5	5
564	71	57	57	51
567	105	5	5	5
587	18	11	11	8
688	19	1	1	1
809	18	2	2	2
2181	2	1	1	1
Totals	***1,532***	***696***	***915***	***814***

Case Response Totals

Prescriber Response	Count
Benefits of the drug outweigh the risks	15
MD unaware of what other MD prescribing	13
Pt is no longer under this MD's care	17
MD says problem is insignificant, no therapy change	143
MD will reassess and modify drug therapy	13
MD tried to modify therapy, Pt non-cooperative	14
Pt under my care but not seen recently	12
Patient deceased	1
Patient was never under MD care	6
Has appointment to discuss therapy	26
MD did not write prescription attributed to him	26
Tried to modify therapy, symptoms reoccurred	8
MD saw patient only once in ER or as on-call MD	8
MD response form returned blank	36
Totals	***338***

Prescriber Response Rate: 41.5%

November 2009 Intervention
Sedative Hypnotics

Prescriber Evaluation Totals

Prescriber Evaluation	Count	Percent of Responses	Percent of Total Letters Mailed
Not useful	30	11.7%	3.7%
Somewhat useful	21	8.2%	2.6%
Neutral	61	23.8%	7.5%
Useful	85	33.2%	10.4%
Extremely useful	59	23.0%	7.2%
Total Responses	***256***		***31.4%***
Total Letters Mailed	***814***		

Cycle Comparison

Criteria Number	Unique Beneficiaries Received Letters	Unique Beneficiaries Intersecting with December 2010 ICER	Percent of Beneficiaries with Therapy Changes
88	5	3	40.0%
165	131	58	55.7%
167	382	120	68.6%
280	6	2	66.7%
310	46	24	47.8%
312	1	0	100.0%
520	3	1	66.7%
564	51	20	60.8%
567	5	3	40.0%
587	8	6	25.0%
688	1	1	0.0%
809	2	0	100.0%
2181	1	0	100.0%
Totals	***642***	***238***	***62.9%***

November 2009 Intervention
Sedative Hypnotics

Estimated Cost Savings Summary

REPORT PARAMETERS

Pre-Intervention time period:	180
Post-Intervention time period:	180
Null period:	14
Intervention Date:	11/16/2009

SUMMARY OF CASE INFORMATION

Total Number of Cases Generated:	696
Total Number of Deleted Cases:	54
Total Number of Letters Sent:	814
Total Number of Completed Cases:	642
Total Number of Unique Patients:	696
Total Number of Patients with Completed Cases:	642
Total Number of Patients Available for Analysis:	642

PATIENT ANALYSIS RESULTS

	# of Beneficiaries	Pre Intervention	Post Intervention	Difference	% Change
Group 1	615	$1,224,731	$1,146,854	$77,876	6.4%
Group 2	0	$0	$0	$0	
Group 3	27	$44,506	$0	$44,506	100%
Group 4	54	$107,839	$87,346	$20,493	19%
Group 5	0	$0	$0	$0	

	Comparison Pre Intervention	Comparison Post Intervention	Difference	% Change
Comparison Group 1	$1,519,705	$1,443,556	$76,149	5%

Estimated Cost Savings: $1,727

KEY TO PATIENT ANALYSIS GROUPS

Group 1 – Patients with completed cases, data is available for both pre & post intervention timeframes.
Group 2 – Incomplete cases
Group 3 – Patients with complete cases but no data available for the post intervention timeframe, patient deceased or lost eligibility after letters were mailed.
Group 4 – Patients with letters deleted during the quality analysis.
Group 5 – Patients with completed cases where there would be an expected cost increase post-intervention.

January 2010 Intervention
Atypical Antipsychotic Duplication

Criteria Summary Case Outcomes

Criteria Number	Therapeutic Criteria Exceptions Reviewed	Cases Generated	Letters Generated	Letters Mailed
99	245	3	3	3
454	1,000	405	584	575
561	642	2	3	3
1258	25	2	2	2
1260	16	1	1	1
2937	2	2	2	2
3087	21	2	2	2
3168	202	33	42	39
3169	81	4	5	5
3170	56	1	1	1
3178	418	4	4	4
3229	15	6	6	6
3231	41	19	23	23
3232	80	56	56	55
3233	3	3	3	3
3308	38	12	13	13
Totals	***2,885***	***555***	***750***	***737***

Case Response Totals

Prescriber Response	Count
Benefits of the drug outweigh the risks	7
MD unaware of what other MD prescribing	4
Pt is no longer under this MD's care	44
MD says problem is insignificant, no therapy change	67
MD will reassess and modify drug therapy	8
MD tried to modify therapy, Pt non-cooperative	4
Pt under my care but not seen recently	2
Patient was never under MD care	10
Has appointment to discuss therapy	13
MD did not write prescription attributed to him	13
Tried to modify therapy, symptoms reoccurred	12
MD saw patient only once in ER or as on-call MD	15
MD response form returned blank	30
Totals	***229***

Prescriber Response Rate: 31.1%

January 2010 Intervention
Atypical Antipsychotic Duplication

Prescriber Evaluation Totals

Prescriber Evaluation	Count	Percent of Responses	Percent of Total Letters Mailed
Not useful	32	19.8%	4.3%
Somewhat useful	17	10.5%	2.3%
Neutral	27	16.7%	3.7%
Useful	54	33.3%	7.3%
Extremely useful	32	19.8%	4.3%
Total Responses	***162***		***22.0%***
Total Letters Mailed	***737***		

Cycle Comparison

Criteria Number	Unique Beneficiaries Received Letters	Unique Beneficiaries Intersecting with December 2010 ICER	Percent of Beneficiaries with Therapy Changes
99	3	2	33.3%
454	403	199	50.6%
561	2	1	50.0%
1258	2	1	50.0%
1260	1	0	100.0%
2937	2	0	100.0%
3087	2	0	100.0%
3168	30	22	26.7%
3169	4	1	75.0%
3170	1	0	100.0%
3178	4	4	0.0%
3229	6	2	66.7%
3231	19	11	42.1%
3232	55	31	43.6%
3233	3	1	66.7%
3308	12	7	41.7%
Totals	***549***	***282***	***48.6%***

January 2010 Intervention
Atypical Antipsychotic Duplication

Estimated Cost Savings Summary

REPORT PARAMETERS

Pre-Intervention time period:	180
Post-Intervention time period:	180
Null period:	14
Intervention Date:	1/18/2010

SUMMARY OF CASE INFORMATION

Total Number of Cases Generated:	555
Total Number of Deleted Cases:	6
Total Number of Letters Sent:	737
Total Number of Completed Cases:	549
Total Number of Unique Patients:	555
Total Number of Patients with Completed Cases:	549
Total Number of Patients Available for Analysis:	549

PATIENT ANALYSIS RESULTS

	# of Beneficiaries	Pre Intervention	Post Intervention	Difference	% Change
Group 1	532	$3,307,110	$3,065,860	$241,250	7.3%
Group 2	0	$0	$0	$0	
Group 3	17	$88,336	$0	$88,336	100%
Group 4	6	$36,852	$42,692	($5,841)	-15.8%
Group 5	0	$0	$0	$0	

	Comparison Pre Intervention	Comparison Post Intervention	Difference	% Change
Comparison Group 1	$2,625,452	$2,508,600	$116,852	4.5%

Estimated Cost Savings: **$124,398**

KEY TO PATIENT ANALYSIS GROUPS

Group 1 – Patients with completed cases, data is available for both pre & post intervention timeframes.
Group 2 – Incomplete cases
Group 3 – Patients with complete cases but no data available for the post intervention timeframe, patient deceased or lost eligibility after letters were mailed.
Group 4 – Patients with letters deleted during the quality analysis.
Group 5 – Patients with completed cases where there would be an expected cost increase post-intervention.

March 2010 Intervention
Muscle Relaxants

Criteria Summary Case Outcomes

Criteria Number	Therapeutic Criteria Exceptions Reviewed	Cases Generated	Letters Generated	Letters Mailed
305	58	55	55	50
620	134	125	168	147
664	175	115	115	102
665	2	2	4	4
666	2	1	1	1
667	116	10	12	11
816	75	6	8	8
1117	122	109	147	124
1119	61	4	4	4
1120	19	18	18	17
1121	22	10	10	9
1122	2	2	2	2
1123	7	6	6	4
1135	18	2	4	4
1858	26	4	4	4
1926	2	1	1	1
2415	14	7	13	12
2791	11	6	6	6
Totals	***866***	***483***	***578***	***510***

Case Response Totals

Prescriber Response	Count
Benefits of the drug outweigh the risks	8
MD unaware of what other MD prescribing	5
Pt is no longer under this MD's care	11
MD says problem is insignificant, no therapy change	75
MD will reassess and modify drug therapy	26
MD tried to modify therapy, Pt non-cooperative	11
Pt under my care but not seen recently	8
Patient was never under MD care	1
Has appointment to discuss therapy	22
MD did not write prescription attributed to him	9
Tried to modify therapy, symptoms reoccurred	4
MD saw patient only once in ER or as on-call MD	8
MD response form returned blank	16
Totals	***204***

Prescriber Response Rate: 40%

March 2010 Intervention
Muscle Relaxants

Prescriber Evaluation Totals

Prescriber Evaluation	Count	Percent of Responses	Percent of Total Letters Mailed
Not useful	18	10.4%	3.5%
Somewhat useful	12	6.9%	2.4%
Neutral	41	23.7%	8.0%
Useful	72	41.6%	14.1%
Extremely useful	30	17.3%	5.9%
Total Responses	***173***		***33.9%***
Total Letters Mailed	***510***		

Cycle Comparison

Criteria Number	Unique Beneficiaries Received Letters	Unique Beneficiaries Intersecting with December 2010 ICER	Percent of Beneficiaries with Therapy Changes
305	50	27	46.0%
620	115	36	68.7%
664	102	0	100.0%
665	2	0	100.0%
666	1	0	100.0%
667	9	2	77.8%
816	6	0	100.0%
1117	96	30	68.8%
1119	4	1	75.0%
1120	17	5	70.6%
1121	9	3	66.7%
1122	2	1	50.0%
1123	4	0	100.0%
1135	2	0	100.0%
1858	4	1	75.0%
1926	1	0	100.0%
2415	7	2	71.4%
2791	6	2	66.7%
Totals	***437***	***110***	***74.8%***

March 2010 Intervention
Muscle Relaxants

Estimated Cost Savings Summary

REPORT PARAMETERS

Pre-Intervention time period:	180
Post-Intervention time period:	180
Null period:	14
Intervention Date:	3/8/2010

SUMMARY OF CASE INFORMATION

Total Number of Cases Generated:	483
Total Number of Deleted Cases:	46
Total Number of Letters Sent:	510
Total Number of Completed Cases:	437
Total Number of Unique Patients:	482
Total Number of Patients with Completed Cases:	436
Total Number of Patients Available for Analysis:	436

PATIENT ANALYSIS RESULTS

	# of Beneficiaries	Pre Intervention	Post Intervention	Difference	% Change
Group 1	418	$1,576,960	$1,559,607	$17,353	1.1%
Group 2	0	$0	$0	$0	
Group 3	18	$64,101	$0	$64,101	100%
Group 4	46	$192,496	$190,535	$1,961	1%
Group 5	0	$0	$0	$0	

	Comparison Pre Intervention	Comparison Post Intervention	Difference	% Change
Comparison Group 1	$1,561,803	$1,607,324	($45,521)	-2.9%

Estimated Cost Savings: $62,874

KEY TO PATIENT ANALYSIS GROUPS

Group 1 – Patients with completed cases, data is available for both pre & post intervention timeframes.

Group 2 – Incomplete cases

Group 3 – Patients with complete cases but no data available for the post intervention timeframe, patient deceased or lost eligibility after letters were mailed.

Group 4 – Patients with letters deleted during the quality analysis.

Group 5 – Patients with completed cases where there would be an expected cost increase post-intervention.

April 2010 Intervention
Diabetes

Criteria Summary Case Outcomes

Criteria Number	Therapeutic Criteria Exceptions Reviewed	Cases Generated	Letters Generated	Letters Mailed
41	120	66	85	64
450	74	72	72	55
488	170	132	157	131
622	13	5	7	5
635	19	10	14	11
1040	6	3	3	3
1045	24	7	7	7
1047	4	1	1	1
1053	39	13	15	14
1054	201	135	135	114
1056	13	6	6	6
1060	27	19	23	21
1143	5	1	1	1
1145	6	2	3	2
1308	82	60	60	50
1602	22	20	20	17
1674	40	7	11	8
2356	4	3	3	3
2573	77	70	73	61
2934	42	39	39	37
2947	1	1	1	1
3045	5	4	4	4
3047	2	1	1	1
3048	3	2	2	2
3150	1	1	1	1
3224	14	13	13	13
Totals	***1,014***	***693***	***757***	***633***

April 2010 Intervention
Diabetes

Case Response Totals

Prescriber Response	Count
Benefits of the drug outweigh the risks	22
MD unaware of what other MD prescribing	1
Pt is no longer under this MD's care	6
MD says problem is insignificant, no therapy change	85
MD will reassess and modify drug therapy	16
MD tried to modify therapy, Pt non-cooperative	1
Pt under my care but not seen recently	8
Patient deceased	2
Patient was never under MD care	2
Has appointment to discuss therapy	21
MD did not write prescription attributed to him	12
Tried to modify therapy, symptoms reoccurred	1
MD saw patient only once in ER or as on-call MD	2
MD response form returned blank	31
Totals	***210***

Prescriber Response Rate: **33.2%**

Prescriber Evaluation Totals

Prescriber Evaluation	Count	Percent of Responses	Percent of Total Letters Mailed
Not useful	28	18.7%	4.4%
Somewhat useful	25	16.7%	3.9%
Neutral	26	17.3%	4.1%
Useful	53	35.3%	8.4%
Extremely useful	18	12.0%	2.8%
Total Responses	***150***		***23.7%***
Total Letters Mailed	***633***		

April 2010 Intervention
Diabetes

Cycle Comparison

Criteria Number	Unique Beneficiaries Received Letters	Unique Beneficiaries Intersecting with December 2010 ICER	Percent of Beneficiaries with Therapy Changes
41	57	30	47.4%
450	55	10	81.8%
488	114	59	48.2%
622	4	0	100.0%
635	9	1	88.9%
1040	3	0	100.0%
1045	7	0	100.0%
1047	1	1	0.0%
1053	13	4	69.2%
1054	114	10	91.2%
1056	6	0	100.0%
1060	17	9	47.1%
1143	1	0	100.0%
1145	2	0	100.0%
1308	50	1	98.0%
1602	17	1	94.1%
1674	7	1	85.7%
2356	3	2	33.3%
2573	59	25	57.6%
2934	37	13	64.9%
2947	1	0	100.0%
3045	4	1	75.0%
3047	1	0	100.0%
3048	2	0	100.0%
3150	1	0	100.0%
3224	13	5	61.5%
Totals	***598***	***173***	***71.1%***

April 2010 Intervention
Diabetes

Estimated Cost Savings Summary

REPORT PARAMETERS

Pre-Intervention time period:	180
Post-Intervention time period:	180
Null period:	14
Intervention Date:	4/19/2010

SUMMARY OF CASE INFORMATION

Total Number of Cases Generated:	693
Total Number of Deleted Cases:	95
Total Number of Letters Sent:	633
Total Number of Completed Cases:	598
Total Number of Unique Patients:	693
Total Number of Patients with Completed Cases:	598
Total Number of Patients Available for Analysis:	413

PATIENT ANALYSIS RESULTS

	# of Beneficiaries	Pre Intervention	Post Intervention	Difference	% Change
Group 1	399	$1,554,456	$1,524,814	$29,642	1.9%
Group 2	0	$0	$0	$0	
Group 3	14	$45,856	$0	$45,856	100%
Group 4	95	$276,992	$247,454	$29,538	10.7%
Group 5	185	$479,671	$505,327	($25,655)	-5.3%

	Comparison Pre Intervention	Comparison Post Intervention	Difference	% Change
Comparison Group 1	$1,253,307	$1,256,909	($3,603)	-0.3%

Estimated Cost Savings: $33,245

KEY TO PATIENT ANALYSIS GROUPS

Group 1 – Patients with completed cases, data is available for both pre & post intervention timeframes.
Group 2 – Incomplete cases
Group 3 – Patients with complete cases but no data available for the post intervention timeframe, patient deceased or lost eligibility after letters were mailed.
Group 4 – Patients with letters deleted during the quality analysis.
Group 5 – Patients with completed cases where there would be an expected cost increase post-intervention.

June 2010 Intervention
Dyslipidemia

Criteria Summary Case Outcomes

Criteria Number	Therapeutic Criteria Exceptions Reviewed	Cases Generated	Letters Generated	Letters Mailed
449	64	53	70	53
547	158	122	122	104
619	49	17	28	25
803	141	32	35	30
899	4	1	1	1
900	166	52	61	57
903	16	1	2	2
914	6	4	4	4
921	2	2	4	2
1011	118	108	108	91
1202	100	88	108	91
1204	8	7	8	7
1252	6	6	9	9
1278	2	1	2	2
1606	16	1	1	0
1624	4	4	4	3
3912	16	14	19	18
Totals	***876***	***513***	***586***	***499***

Case Response Totals

Prescriber Response	Count
Benefits of the drug outweigh the risks	10
Pt is no longer under this MD's care	8
MD says problem is insignificant, no therapy change	53
MD will reassess and modify drug therapy	19
MD tried to modify therapy, Pt non-cooperative	2
Pt under my care but not seen recently	1
Patient deceased	1
Patient was never under MD care	4
Has appointment to discuss therapy	14
MD did not write prescription attributed to him	8
MD saw patient only once in ER or as on-call MD	2
MD response form returned blank	13
Totals	***135***

Prescriber Response Rate: **27.1%**

June 2010 Intervention
Dyslipidemia

Prescriber Evaluation Totals Report

Prescriber Evaluation	Count	Percent of Responses	Percent of Total Letters Mailed
Not useful	14	13.6%	2.8%
Somewhat useful	5	4.9%	1.0%
Neutral	28	27.2%	5.6%
Useful	32	31.1%	6.4%
Extremely useful	24	23.3%	4.8%
Total Responses	***103***		***20.6%***
Total Letters Mailed	***499***		

June 2010 Intervention
Dyslipidemia

Estimated Cost Savings Summary

REPORT PARAMETERS

Pre-Intervention time period:	120
Post-Intervention time period:	120
Null period:	14
Intervention Range:	6/8/2010

SUMMARY OF CASE INFORMATION

Total Number of Cases Generated:	513
Total Number of Deleted Cases:	66
Total Number of Letters Sent:	499
Total Number of Completed Cases:	447
Total Number of Unique Patients:	513
Total Number of Patients with Completed Cases:	447
Total Number of Patients Available for Analysis:	343

PATIENT ANALYSIS RESULTS

	# of Beneficiaries	Pre Intervention	Post Intervention	Difference	% Change
Group 1	319	$849,412	$800,772	$48,640	5.7%
Group 2	0	$0	$0	$0	
Group 3	24	$45,758	$0	$45,758	100%
Group 4	66	$143,391	$136,377	$7,014	4.9%
Group 5	104	$247,869	$224,191	$23,678	9.6%

	Comparison Pre Intervention	Comparison Post Intervention	Difference	% Change
Comparison Group 1	$720,905	$681,397	$39,509	5.5%

Estimated Cost Savings: $9,131

KEY TO PATIENT ANALYSIS GROUPS

Group 1 – Patients with completed cases, data is available for both pre & post intervention timeframes.
Group 2 – Incomplete cases
Group 3 – Patients with complete cases but no data available for the post intervention timeframe, patient deceased or lost eligibility after letters were mailed.
Group 4 – Patients with letters deleted during the quality analysis.
Group 5 – Patients with completed cases where there would be an expected cost increase post-intervention.

Appendix A

November 2009 Intervention Criteria

Criteria Number	Alert Message
88	Anxiolytic agents may be over-utilized.
165	Sedative agents are usually intended for short term use.
167	Therapeutic duplication of anxiolytic agents may be occurring.
172	Benzodiazepines may increase the risk of accidental falls in the elderly which may result in fractures.
280	Benzodiazepines should be used with caution in patients with hepatic impairment.
310	Benzodiazepines may increase the risk of pulmonary failure and should therefore be used with caution in patients with COPD.
312	Due to their potential for abuse and dependence, benzodiazepines should be used with caution in patients with a history of drug abuse.
520	Therapeutic duplication of sedative/hypnotics may be occurring.
564	The failure of insomnia to remit after 7 to 10 days of treatment may indicate the need to evaluate for an unrecognized primary psychiatric or medical illness.
567	Sedative/hypnotic drugs, should be administered with caution in patients exhibiting signs and symptoms of depression. Intentional overdose is more common in this group of patients, therefore prescribe the least amount of the drug that is feasible for the patient at one time.
587	Benzodiazepine anxiolytic agents with long half-lives should be avoided in the elderly due to their increased sensitivity to these agents. Chronic dosing of these agents may result in accumulation of the parent compound and the active metabolites causing prolonged sedation and increased risk of falls/ fractures. Anxiolytics with short to intermediate half-lives such as oxazepam and lorazepam are recommended as alternatives.
688	Due to the potential for abuse and dependence, hypnotics should be used with caution.
809	The profile history indicates that the patient has a diagnosis of osteoporosis and is receiving sedative/ anxiolytic therapy. The use of sedatives and/or anxiolytic therapy may result in increased sedation. In patients with osteoporosis this may increase the risk of falls and fractures. This patient may be at risk since they are not currently receiving treatment for osteoporosis.
2181	Lunesta (eszopiclone) should be used with caution in patients with severe hepatic impairment. Exposure is reportedly increased 2-fold in severely impaired patients compared to healthy volunteers. The dose of eszopiclone should not be increased above 2 mg per day in patients with severe hepatic impairment. No dosage adjustment is necessary in patients with mild-to moderate hepatic impairment.

Appendix A

January 2010 Intervention Criteria

Criteria Number	Alert Message
99	Antipsychotic agents may cause or exacerbate convulsive disorders.
454	Therapeutic duplication of atypical antipsychotic agents may be occurring.
561	Therapeutic duplication of atypical antipsychotic agents may be occurring.
1258	Coadministration of Abilify (aripiprazole) and a CYP2D6 inhibitor (fluoxetine, paroxetine or fluvoxamine) may result in an increase in the AUC of aripiprazole. The aripiprazole dose should be reduced to one-half its normal dose when concomitant administration of these agents occurs. When the CYP2D6 inhibitor is withdrawn the aripiprazole dose should be increased.
1260	Abilify (aripiprazole) should be used cautiously in patients with a history of seizures or with conditions that lower the seizure threshold.
2937	Invega (paliperidone) is the major active metabolite of Risperdal (risperidone) and concurrent use of these agents may result in additive paliperidone exposure and risk of adverse effects.
3087	Seroquel (quetiapine) should be prescribed with caution to patients with a history of substance abuse. The agent has sedative and anxiolytic properties and may be misused by some patients. Closely observe patients for signs of misuse or abuse. The use of quetiapine may put patients at risk for arrhythmias, hypotension, weight gain, and diabetes.
3168	The patient is receiving multi-class polypsychopharmacy. Review the patient's medication history for any unintended additional therapy and assess adherence to ensure efficacy. Complex drug regimens increase the risk of adverse effects, drug/drug interactions, and non-adherence which may result in the relapse of the disease state.
3169	The patient is receiving multi-class polypsychopharmacy. Review the patient's medication history for any unintended additional therapy and assess adherence to ensure efficacy. Complex drug regimens increase the risk of adverse effects, drug/drug interactions, and non-adherence which may result in the relapse of the disease state.
3170	The patient is receiving multi-class polypsychopharmacy. Review the patient's medication history for any unintended additional therapy and assess adherence to ensure efficacy. Complex drug regimens increase the risk of adverse effects, drug/drug interactions, and non-adherence which may result in the relapse of the disease state.
3178	The use of second-generation antipsychotics (SGAs) has been associated with the development of serious health risks (e.g., cardiovascular disease, diabetes, dramatic weight gain, and atherogenic lipid profiles). All patients should receive baseline screenings for risk factors associated with metabolic syndrome before receiving a SGA and regular monitoring of metabolic parameters throughout therapy. If metabolic risk factors cannot be controlled consider switching, if clinically possible, to a SGA with a more favorable metabolic profile.
3229	The patient has hypertension and is receiving an antipsychotic that has a moderate- to high-risk for cardio-metabolic disorders. Patients with major mental illness (e.g., schizophrenia and bipolar disorder) have increased risks of morbidity and mortality, due primarily to cardiovascular disease. If possible, consider an antipsychotic agent that has a more favorable cardio-metabolic adverse effect profile. All patients prescribed an antipsychotic agent should received baseline screening for personal and family history of obesity, diabetes, dyslipidemia, hypertension, and cardiovascular disease. The therapeutic benefits achieved with moderate- to high-risk antipsychotics may be offset by the reduction in life-expectancy related to drug induced cardio-metabolic disease.

Appendix A

January 2010 Intervention Criteria

Criteria Number	Alert Message
3231	The patient has hyperlipidemia and is receiving an antipsychotic that has a moderate- to high-risk for cardio-metabolic disorders. Patients with major mental illness (e.g., schizophrenia and bipolar disorder) have increased risks of morbidity and mortality, due primarily to cardiovascular disease. If possible, consider an antipsychotic agent that has a more favorable cardio- metabolic adverse effect profile. All patients prescribed an antipsychotic agent should received baseline screening for personal and family history of obesity, diabetes, dyslipidemia, hypertension, and cardiovascular disease. The therapeutic benefits achieved with moderate- to high-risk antipsychotics may be offset by the reduction in life-expectancy related to drug induced cardio-metabolic disease.
3232	The patient has diabetes and is receiving an antipsychotic that has a moderate- to high-risk for cardio-metabolic disorders. Patients with major mental illness (e.g., schizophrenia and bipolar disorder) have increased risks of morbidity and mortality, due primarily to cardiovascular disease. If possible, consider an antipsychotic agent that has a more favorable cardio- metabolic adverse effect profile. All patients prescribed an antipsychotic agent should received baseline screening for personal and family history of obesity, diabetes, dyslipidemia, hypertension, and cardiovascular disease. The therapeutic benefits achieved with moderate- to high-risk antipsychotics may be offset by the reduction in life-expectancy related to drug induced cardio-metabolic disease.
3233	The patient is obese and is receiving an antipsychotic that has a moderate- to high-risk for cardio-metabolic disorders. Patients with major mental illness (e.g., schizophrenia and bipolar disorder) have increased risks of morbidity and mortality, due primarily to cardiovascular disease. If possible, consider an antipsychotic agent that has a more favorable cardio-metabolic adverse effect profile. All patients prescribed an antipsychotic agent should receive baseline screening for personal and family history of obesity, diabetes, dyslipidemia, hypertension, and cardiovascular disease. The therapeutic benefits achieved with moderate- to high-risk antipsychotics may be offset by the reduction in life-expectancy related to drug induced cardio-metabolic disease.
3308	Patients prescribed Risperdal Consta (risperidone injection) should received antipsychotic supplementation until risperidone has achieved steady-state plasma concentrations, typically after 4 injections. The use of oral antipsychotics with risperidone injection beyond the recommended transition time period may represent an unnecessary duplication of therapy.

Appendix A

March 2010 Intervention Criteria

Criteria Number	Alert Message
305	Carisoprodol is usually intended for short-term use. Carisoprodol is metabolized by the liver to meprobamate and patients may be at risk for developing dependence.
620	Therapeutic duplication of skeletal muscle relaxants may be occuring.
664	Tizanidine occasionally causes liver injury. Monitoring aminotransferase levels is recommended during the first 6 months of treatment (e.g. baseline 1, 3 and 6 months) and periodically thereafter, based on clinical status.
665	Tizanidine should be used with caution in patients receiving oral contraceptives due to the increased risk of tizanidine adverse effects resulting from the reduced clearance of tizanidine.
666	Tizanidine should be used with caution in patients with psychosis. Tizanidine use has been associated with hallucinations and psychotic-like symptoms.
667	The concurrent use of tizanidine and CNS depressant medications may result in additive sedation.
816	Tizanidine should be used with caution in patients receiving concurrent antihypertensive therapy and should not be used with other alpha2-adrenergic agonists due to the increased risk of hypotension.
1117	The coadministration of cyclobenzaprine and tricyclic antidepressants should be done with caution. Cyclobenzaprine is pharmacologically related to these agents and coadministration may result in the risk of more serious central nervous system adverse reactions.
1119	Cyclobenzaprine should be used only for short periods (up to two or three weeks) because adequate evidence for more prolonged use is not available. Muscle spasm associated with acute painful musculoskeletal conditions is generally of short duration and specific therapy for longer periods is seldom warranted.
1120	Cyclobenzaprine may be over-utilized. The manufacturer's recommended maximum daily dose is 30 mg.
1121	Cyclobenzaprine should be used with caution in the elderly. These patients may be a greater risk for adverse CNS effect such as hallucinations and confusion, due to possible age-related impaired hepatic metabolism and clearance.
1122	The efficacy and safety of cyclobenzaprine in patients under 15 years of age has not been established.
1123	The use of cyclobenzaprine is contraindicated in patients with hyperthyroidism. Cyclobenzaprine may increase the risk of cardiac arrhythmias and may exacerbate tachycardia associated with hyperthyroidism.
1135	The coadministration of cyclobenzaprine and medications that cause CNS depression should be done with caution. Cyclobenzaprine may enhance the sedative effects of these agents.
1858	Most muscle relaxants are poorly tolerated by elderly patients due to anticholinergic adverse effects, sedation and weakness. Additionally, their effectiveness at doses tolerated by elderly patients is unclear.
1926	Carisoprodol may be over-utilized. The manufacturer's recommended maximum daily dose is 1400mg. Higher doses may cause increased sedation and dizziness.
2415	Caution is recommended when considering concomitant use of tizanidine with inhibitors of CYP1A2, such as antiarrhythmics (amiodarone, mexiletine, verapamil, and propafenone), cimetidine, famotidine, certain fluoroquinolones (norfloxacin, levofloxacin, lomefloxacin, and ofloxacin), zileuton, acyclovir, and ticlopidine. The concurrent use of these agents may increase the risk of profound hypotension and dizziness.
2791	Clinical trials have not shown Skelaxin (metaxalone) to be superior to other skeletal muscle relaxants (SMRs). If no contraindications are present consider prescribing a less expensive generic SMR as first-line therapy before prescribing a brand name product. Generic skeletal muscle relaxant options include methocarbamol, chlorzoxazone, baclofen, cyclobenzaprine, and tizanidine.

Appendix A

April 2010 Intervention Criteria

Criteria Number	Alert Message
41	The addition of thyroid hormone to sulfonylurea therapy may result in increased dosage requirements of the sulfonylurea. Monitor patients for loss of diabetic control, especially when thyroid therapy is started, changed, or discontinued.
450	Patients with renal impairment or a past history of lactic acidosis may be at increased risk of developing lactic acidosis when receiving metformin therapy.
488	Moderate to high doses of thiazide diuretics impair diabetic control by decreasing insulin sensitivity leading to glucose intolerance and hyperglycemia. Blood glucose and electrolyte (i.e., potassium, sodium) levels should be closely monitored in these patients. Dosage adjustment of antidiabetic agents may be necessary.
622	Therapeutic duplication of thiazolidinedione antidiabetic agents may be occurring.
635	Therapeutic duplication of sulfonylureas may be occuring.
1040	Starlix (nateglinide) is contraindicated in patients with Type I Diabetes.
1045	Actos (pioglitazone) may be under-utilized resulting in potential subtherapeutic effects.
1047	Non-adherence to Avandia (rosiglitazone) therapy may result in loss of glycemic control and an increased risk of developing adverse diabetic-related complications.
1053	Pioglitazone-containing products may cause or exacerbate congestive heart failure. Their use is contraindicated in patients with NYHA class 3 or 4 heart failure and not recommended in patients with symptomatic heart failure. Patients should be observed for signs and symptoms of heart failure (rapid weight gain, dyspnea, and/or edema). If heart failure develops initiate appropriate therapy and consider alternative antidiabetic therapy.
1054	Non-adherence to metformin therapy may result in loss of glycemic control and an increased risk of developing adverse diabetic-related complications.
1056	Non-adherence to metformin extended-release therapy may result in loss of glycemic control and an increased risk of developing adverse diabetic-related complications.
1060	Coadministration of sulfonylureas and GI prokinetic agents should be carefully monitored. Metoclopramide can enhance gastric emptying and may result in altered clinical response to antidiabetic agents. The dosing of sulfonylureas may require adjustment in patients receiving GI prokinetic agents concomitantly.
1143	Coadministration of sulfonylureas and beta-blockers should be carefully monitored. Non-selective beta-blockers may mask the tachycardic symptoms of hypoglycemia and delay the recovery time of hypoglycemia. Use of selective beta-blockers (e.g. metoprolol, atenolol) may have a decreased risk of effecting glycemic control which may not prolong recovery time in mild and moderate hypoglycemia.
1145	Coadministration of non-selective beta-blockers (e.g. propranolol, nadolol) and insulin should be done with caution. Non-selective beta-blockers may mask the tachycardic symptoms of hypoglycemia and delay the recovery time of hypogylcemia. Use of selective beta-blockers (e.g. metoprolol, atenolol) may have a decreased risk of effecting glycemic control which may not prolong recovery time in mild and moderate hypoglycemia.
1308	The sulfonylurea may be under-utilized resulting in potential sub-therapeutic effects.
1602	Thiazolidinediones, alone or in combination with other antidiabetic agents, can cause fluid retention, which may exacerbate or lead to heart failure. Patients should be observed for signs and symptoms of heart failure. Discontinue thiazolidinedione therapy if any deterioration in cardiac status occurs. Rosiglitazone and pioglitazone are contraindicated in patients with NYHA Class 3 and 4 cardiac status. Rosiglitazone should only be prescribed to patients with type 2 diabetes who cannot control their diabetes on other medications and unable to take a piogliatzone-containing agent.
1674	Therapeutic duplication of metformin-containing products may be occurring.

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April 2010 Intervention Criteria

Criteria Number	Alert Message
2356	Coadministration of meglitinides with sulfonylureas is not recommended. Concomitant use may increase the risk of hypoglycemia and may not produce any additional clinical benefit.
2573	Non-selective beta-blockers should be used with caution in patients with diabetes. These agents may mask the sugns and symptoms of hypoglycemia and delay recovery time. Beta blockade also reduces the release of insulin in response to hyperglycemia; it may be necessary to adjust the dose of antidiabetic drugs. Cardio-selective beta-blockers are preferred due to the decreased risk of adverse effects on glucose regulation.
2934	Januvia (sitagliptin) should not be used in patients with type 1 diabetes mellitus or for the treatment of diabetic ketoacidosis.
2947	Rosiglitazone-containing products may cause or exacerbate congestive heart failure. Their use is contraindicated in patients with NYHA class 3 or 4 heart failure and not recommended in patients with symptomatic heart failure. Patients should be observed for signs and symptoms of heart failure (rapid weight gain, dyspnea, and /or edema). If heart failure develops initiate appropriate therapy and consider alternative antidiabetic therapy.
3045	Non-adherence to Janumet (sitagliptin/metformin) therapy may result in loss of glycemic control and an increased risk of developing adverse diabetic-related complications.
3047	Non-adherence to Avandamet (rosiglitazone/metformin) therapy may result in loss of glycemic control and an increased risk of developing adverse diabetic-related complications.
3048	Non-adherence to ActoPlus Met (pioglitazone/metformin) therapy may result in loss of glycemic control and an increased risk of developing adverse diabetic-related complications.
3150	Rosiglitazone-containing products (Avandia/Avandamet/Avandaryl) may increase the risk of myocardial ischemia especially in patients with underlying heart disease. Patients receiving nitrates and/or insulin concurrently with rosiglitazone are at an even higher risk of ischemic cardiovascular events. If rosiglitazone therapy is clinically necessary monitor the patient closely for signs and symptoms of myocardial ischemia.
3224	Byetta (exenatide) is not a substitute for insulin in insulin-requiring patients. Exenatide should not be used in patients with type 1 diabetes or for the treatment of diabetic ketoacidosis.

Appendix A

June 2010 Intervention Criteria

Criteria Number	Alert Message
449	The combination of HMG-Co-A reductase inhibitors and gemfibrozil can cause severe myopathy, rhabdomyolysis and sometimes renal failure.
547	Lipid lowering agents may be underutilized resulting in subtherapeutic effects.
619	Therapeutic duplicatiom of HMG CoA reductase inhibitors may be occurring.
803	The combination of HMG-CoA reductase inhibitors and niacin or fibrates can cause severe myopathy, rhabdomyolysis, and possible renal failure. The risk increases with existing renal impairment, advanced age (>65) and inadequately treated hypothyroidism. Use caution when administering these drugs concomitantly.
899	The simvastatin-containing agent may be over-utilized. The manufacturer's recommended maximum daily dose is 80 mg. Exceeding the maximum dose may increase the risk of adverse effects, includig occurrence of myopathy and/or rhabdomyolysis.
900	Coadministration of diltiazem or verapamil and lovastatin, Zocor (simvastatin), or Lipitor (atorvastatin) is not recommended. Diltiazem and verapamil inhibit the metabolism of these medications thereby increasing the risk of developing myopathy or rhabdomyolysis.
903	Coadministration of atorvastatin, fluvastatin, or simvastatin and digoxin should be done with caution. These medications can elevate digoxin serum levels through an unknown mechanism. Consider monitoring digoxin levels if initiating or changing the dose of one of these medications.
914	Therapeutic duplication of fibric acid derivatives may be occurring.
921	Therapeutic duplication of bile acid resins may be occurring.
1011	HMG CoA reductase inhibitors have been reported to cause injury to skeletal muscles resulting in myopathy or rhabdomyolysis. If symptoms of myopathy persist or the creatine phosphokinase (CPK) values are more than 10 times the upper limit of normal, consider discontinuing the HMG-CoA reductase inhibitor.
1202	Coadministration of diltiazem with lovastatin, simvastatin, or atorvastatin should be done with caution. Diltiazem may inhibit the metabolism of these medications thereby increasing the risk of developing myopathy or rhabdomyolysis. Consider an alternative statin (e.g. pravastatin) which is less likely to interact.
1204	Concurrent use of verapamil and simvastatin may increase the risk of myopathy/rhabdomyolysis, particularly with simvastatin doses greater than 20 mg daily. Dose of simvastatin greater than 20 mg per day in patients taking verapamil should be avoided unless the clinical benefit outweighs the increased risk of myopathy/rhabdomyolysis. Consider using an alternative statin (i.e., pravastatin, fluvastatin, or rosuvastatin) which is not metabolized by CYP3A4.
1252	The safety and effectiveness of the coadministration of Zetia (ezetimibe) and fibrates (gemfibrozil and fenofibrate) have not been established. Both agents may increase cholesterol excretion in the bile, leading to cholelithiasis.
1278	Coadministration of ezetimibe and a HMG CoA reductase inhibitor is contraindicated in patients with active liver disease or unexplained persistent elevations in serum transaminases. Concurrent therapy may cause elevated serum transaminse levels.
1606	The lipid lowering medication may be under-utilized. Non-adherence to the dosing regimen may result in sub-therapeutic effects, which may lead to decreased patient outcomes and additional medical costs.
1624	The concomitant use of Crestor (rosuvastatin) and gemfibrozil should generally be avoided. If rosuvastatin must be used in combination with gemfibrozil the dose of rosuvastatin should not exceed 10 mg once daily. Exceeding this dosage of rosuvastatin may increase the risk of myopathy and/or rhabdomyolysis.

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June 2010 Intervention Criteria

Criteria Number	Alert Message
3912	Concurrent use of verapamil and atorvastatin may increase the risk of myopathy/rhabdomyolysis due to inhibition, by verapamil, of CYP3A4-mediated atorvastatin metabolism. Consider using an alternative statin (i.e., pravastatin, fluvastatin, or rosuvastatin) which is not metabolized by CYP3A4. If coadministration cannot be avoided, use the lowest possible dose of atorvastatin.